

WE CLAIM:

5 1. A flexible adsorbent-loaded filter comprising a flexible support web and attached adsorbent particles, wherein the adsorbent loaded filter is flexible and has open filter cells which are defined by the support web and the attached adsorbent particles, and are random in size and orientation through the length and depth of the filter, support web is formed of substantially nonlinear filaments that randomly intersect, and wherein the adsorbent particles largest average cross-sectional dimension is smaller than the average diameter of the pores of the support web wherein when the flexible adsorbent--loaded
10 filter is flexed about a radius of curvature 20 mm, the percent increases in pressure drop is less than 100 percent when measured at a face velocity of 0.25 m/s.

15 2. The flexible adsorbent-loaded filter of claim 1, wherein the support web is coated with an adhesive or binder on all or a portion of its surface area.

20 3. The flexible adsorbent-loaded filter of claim 2, wherein the adhesive is a (meth)acrylate pressure sensitive adhesive and is substantially free of low molecular weight component and solvents.

25 4. The flexible adsorbent-loaded filter of claim 1, wherein the adsorbent particles are free flowing.

5. The flexible adsorbent-loaded filter of claim 4, wherein the adsorbent particles have aspect ratios from 1 to 5.

6. The flexible adsorbent-loaded filter of claim 4, wherein the adsorbent particles have aspect ratios 1 to 2.

30 7. The flexible adsorbent-loaded filter of claim 4, wherein the adsorbent particles largest cross sectional dimension is 2 to 100 smaller than the diameter of the pores of the support web.

8. The flexible adsorbent-loaded filter of claim 7, wherein the adsorbent particles largest cross sectional dimension is 2 to 10 times smaller than the diameter of the pores of the support web.

9. The flexible adsorbent-loaded filter of claim 1, wherein the adsorbents comprise activated carbon or charcoal.

10. The flexible adsorbent-loaded filter of claim 1, wherein the support web filaments are generally nonlinear between their points of contact or bonding.

11. The flexible adsorbent-loaded filter of claim 1, wherein the filaments have an average diameter of from 0.05 to 2 mm and are formed of a flexible thermoplastic polymer.

12. The flexible adsorbent-loaded filter of claim 11, wherein the filaments have an average diameter of at least 0.1 mm.

13. The flexible adsorbent-loaded filter of claim 1, wherein the support web is a coiled support web formed from substantially continuous filaments.

14. The flexible adsorbent-loaded filter of claim 1, wherein the pore size of the support web without the adsorbent particles is on average from 1 to 10 mm.

15. The flexible adsorbent-loaded filter of claim 1, wherein the pore size of the support web without the adsorbent particles is on average from 2 to 5 mm.

16. The flexible adsorbent-loaded filter of claim 1, wherein flexible adsorbent-loaded filter is able to flex about a radius of curvature of 5 mm or more.

17. The flexible adsorbent-loaded filter of claim 1, wherein the overall filter generally has a thickness from 5 to 50 mm.

5 18. The flexible adsorbent-loaded filter of claim 1, wherein the overall filter generally has a thickness of from 5 to 20 mm.

10 19. The flexible adsorbent-loaded filter of claim 1, wherein the percent increase in pressure drop is less than 50 percent when measured at a face velocity of 0.25 m/s.

15 20. The flexible adsorbent-loaded filter of claim 1, wherein at a radius of curvature of 20 mm, the percent increase in pressure drop is generally less than 35 percent when measured at a face velocity of 0.25 m/s.